



UNISONIC TECHNOLOGIES CO., LTD

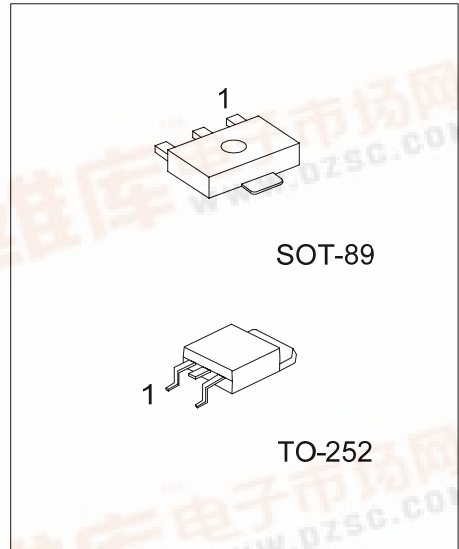
UN1066

NPN SILICON TRANSISTOR

HIGH SPEED SWITCHING TRANSISTOR

FEATURES

- * Low $V_{CE(SAT)}$ voltage, up to 3A
- * Suitable for fast switching applications
- * High current gain



*Pb-free plating product number: UN1066L

ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
UN1066-AB3-R	UN1066L-AB3-R	SOT-89	B	C	E	Tape Reel
UN1066-TN3-R	UN1066L-TN3-R	TO-252	B	C	E	Tape Reel
UN1066-TN3-T	UN1066L-TN3-T	TO-252	B	C	E	Tube

UN1066L-AB3-R		(1) R: Tape Reel, T: Tube (2) AB3: SOT-89, TN3: TO-252 (3) L: Lead Free Plating, Blank: Pb/Sn
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■ ABSOLUTE MAXIMUM RATING (Ta=25°C)

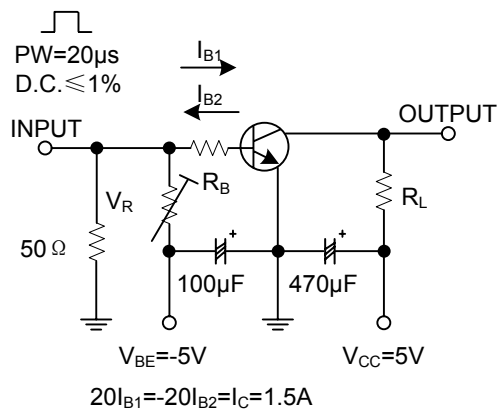
PARAMETER	SYMBOL	RATINGS	UNIT
Collector-to-Base Voltage	BV_{CBO}	20	V
Collector-to-Emitter Voltage	BV_{CEO}	15	V
Emitter-to-Base Voltage	BV_{EBO}	5	V
Collector Current	I_C	6	A
Collector Current (Pulse)	I_{CP}	9	A
Base Current	I_B	600	mA
Collector Dissipation (T _C =25°C)	P_C	3.5	W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55 ~ +150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

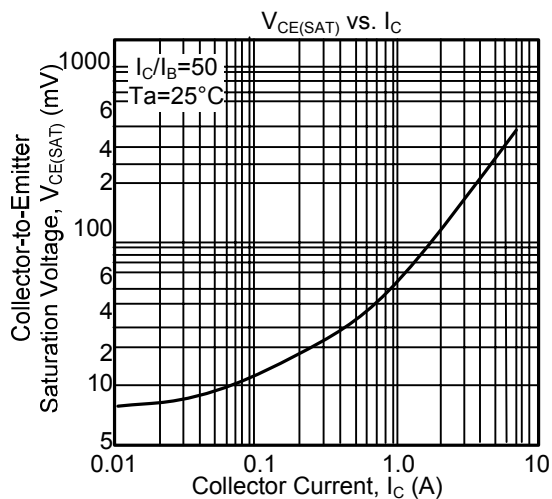
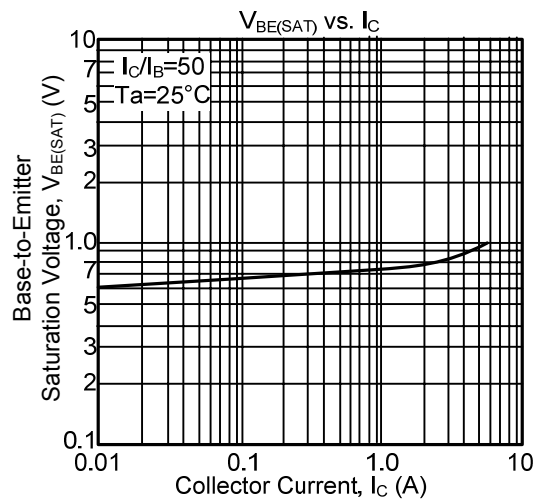
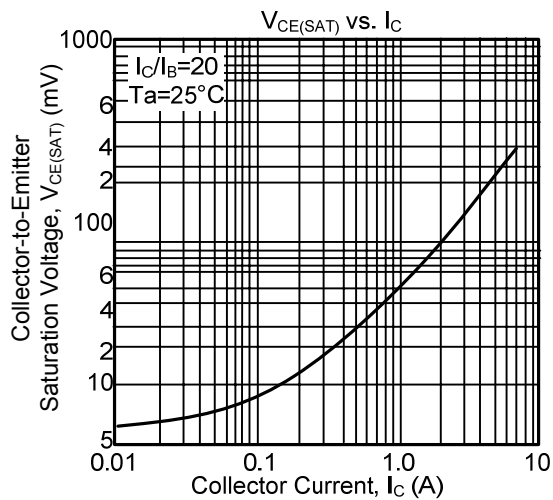
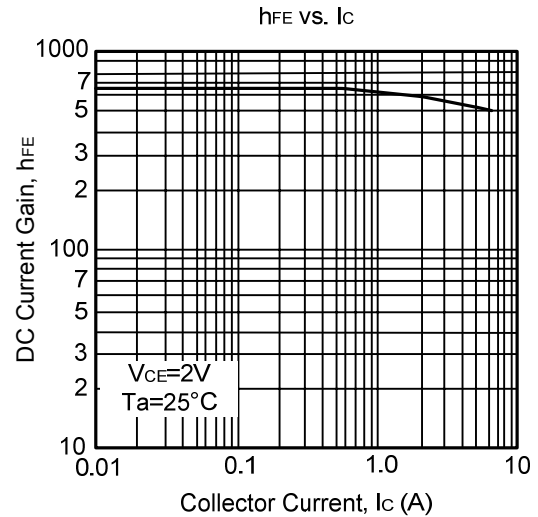
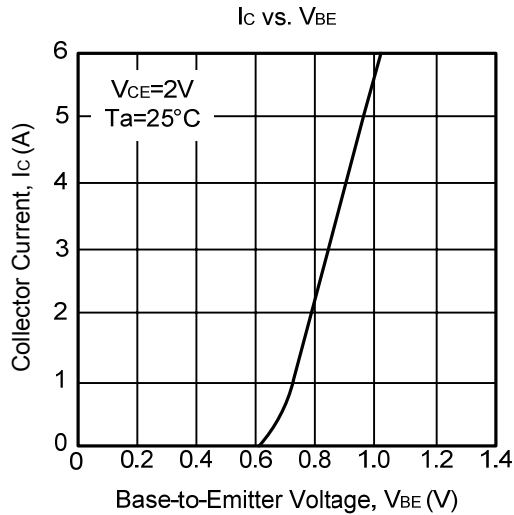
■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-to-Base Breakdown Voltage	BV_{CBO}	$I_C=10\mu A, I_E=0$	20			V
Collector-to-Emitter Breakdown Voltage	BV_{CEO}	$I_C=1mA, R_{BE}=\infty$	15			V
Emitter-to-Base Breakdown Voltage	BV_{EBO}	$I_E=10\mu A, I_C=0$	6			V
Collector-to-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=1.5A, I_B=30mA$			180	mV
		$I_C=3A, I_B=60mA$			300	mV
Base-to-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C=1.5A, I_B=30mA$			1.2	V
Collector Cutoff Current	I_{CBO}	$V_{CB}=12V, I_E=0$			0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4V, I_C=0$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=0.5V, I_C=5A$	250			
Gain-Bandwidth Product	f_T	$V_{CE}=2V, I_C=500mA$	100			MHz
Output Capacitance	C_{ob}	$V_{CB}=10V, f=1MHz$			50	pF
Turn-on Time	t_{ON}	Refer to Test Circuit			50	ns
Storage Time	t_{STG}	Refer to Test Circuit			250	ns
Fall Time	t_F	Refer to Test Circuit			25	ns

■ TEST CIRCUIT



■ TYPICAL CHARACTERISTICS



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